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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,601	12/10/2001	Jiebo Luo	83492THC	5347

7590

10/04/2005

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EXAMINER

ROSARIO, DENNIS

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/016,601

Applicant(s)

LUO ET AL.

Examiner

Dennis Rosario

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 is/are allowed.
- 6) ☒ Claim(s) 1-23 and 25-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2005 and 10 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All- b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)          |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date: <u>6 Sept. 2005</u>                                  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The after final amendment was received on August 31, 2005. Claims 1-33 are pending. Note that a telephonic interview with attorney of record, Robert Luke Walker, who did not want to provide a showing to overcome the below 102(e) references; thus, a notice of allowability by the examiner was denied.

### ***Double Patenting***

2. Due to the amendment of claims 1, 26 and 28, the double patenting rejection is withdrawn with respect to US Patent 6,891,977 B2.

### ***Claim Rejections - 35 USC § 101***

3. Due to the amendment of claim 25, the 101 rejection is withdrawn.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1, 26 and 28 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. Claims 1-23 and 25-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Luo et al. (US Patent Application Publication US 2002/0093670 A1 with application No. 09/732,503).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Luo et al. discloses a method for processing a digital image, comprising the steps of:

- a) providing a subject matter detector (Fig. 1, num. 4) for distinguishing between target (fig. 4, label: MAIN SUBJECT) and background subject matters (fig. 4, label: "BACKGROUND");
- b) applying the subject matter detector (Fig. 1 applies num. 4 as the subject matter detector.) to the digital image (fig. 1, num. 2) to produce a belief map of values (fig. 1, num. 10) indicating the degree of belief that pixels in the image belong to target subject matter;
- c) analyzing said belief map (Fig. 3, num 28 "compares" or analyzes said belief map or "belief map" in paragraph [0065], line 2.) to provide an analysis result (Fig. 3, num. 28: BINARY MAP is the analysis result based on the comparison.); and

e) enhancing said digital image (Fig. 3, num. 32 performs an enhancing or modifying operation.), said enhancing varying in degree pixel by pixel ("each pixel" in page 6, paragraph [0069], line 1 or "varying...the pixel" in page 6, paragraph [0081], lines 1,2) responsive (via the processing path of fig. 3) to both said belief map and said analysis result.

Regarding claim 2, Luo et al. discloses a method, wherein a plurality of subject matter detectors are provided (fig. 4, num. 42 is an indicator.), and further comprising:

a) the step of selecting one or more of the provided subject matter detectors (fig. 4, num. 40).

Regarding claim 3, Luo et al. discloses the method claimed in claim 1, wherein a plurality of image enhancement operations are provided (fig. 4, num. 44 is a modifier.), and further comprising:

a) the step of selecting one or more of the provided image enhancement operations (fig. 4, num. 44: "PRE-SELECTED").

Regarding claims 4-8,17 and 29, see figure 5.

Regarding claims 9-14 and 18, see fig. 4 num. 46, which is an emphasizing step.

Regarding claim 15 see abstract "zoom".

Regarding claim 16 see paragraph [0092], line 10: "filling".

Regarding claim 19, Luo et al. discloses the claimed sizes or "size" in page 3, paragraph [0043], line 4.

Regarding claim 20, Luo et al. discloses the claimed locations or "centroid" in page 3, paragraph [0043], line 1.

Claim 21 is rejected the same as claim 19. Thus, argument similar to that presented above for claim 19 is equally applicable to claim 21.

Regarding claim 22, see abstract: "crop".

Claims 23 and 30 are rejected the same as claim 1. Thus, argument similar to that presented above for claim 1 is equally applicable to claims 23 and 30.

Regarding claim 25 see paragraph [0085]: "RAM".

Claims 26 and 28 are rejected the same as claim 1. Thus, argument similar to that presented above for claim 1 is equally applicable to claims 26 and 28.

Regarding claim 27, see paragraph [0054], lines 1-4.

Claims 31-33 are rejected the same as claims 2, 15 and 3, respectively. Thus, argument similar to that presented above for claims 2, 15 and 3 is equally applicable to claims 31-33, respectively.

***Allowable Subject Matter***

7. Claim 24 is allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

Claim 24 is allowed for the same reason as indicated in a previous action dated 6/27/2005 all of which is incorporated by reference.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Note that the first two cited references (Gallagher (US Patent 6,891,977 B2) and Dupin et al. (US Patent 6,845,181 B2)) is applicable under 102(e); however, an additional showing under 102(e) is redundant. If applicant overcomes the Luo et al. 102(e) reference (US 2002/0093670 A1) above by a showing under 37 CFR 1.131, then applicant is advised to do the same with Gallagher (US Patent 6,891,977 B2) and Dupin et al. (US Patent 6,845,181 B2).

Gallagher (US Patent 6,891,977 B2) is pertinent as teaching a method of "sharpening...on a pixel-by-pixel...basis" in col. 6, lines 26,27 and fig. 5, num. 24 is the claimed "analyzing".

Dupin et al. (US Patent 6,845,181 B2) is pertinent as teaching a method of "brightness adjustment" in col. 6, line 43 that adjusts a "center pixel" in col. 6, line 62 which corresponds to the claimed "pixel by pixel" and fig. 3, num. 210 is the claimed "analysis result."

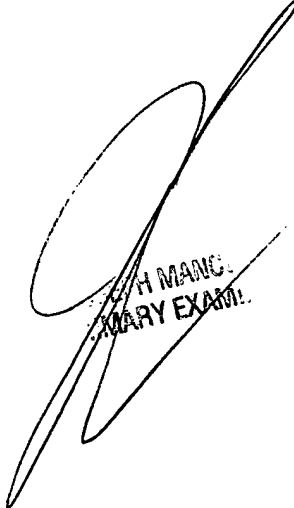
Gallagher et al. (US Patent Application Publication No. 2003/0108245 A1 with Application No. 10/020,031) is pertinent as teaching a map analyzer in fig. 1,num. 8, but fig. 1,num. 10 does not enhance on a pixel by pixel basis instead it enhance uniformly.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 6-3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Dennis Rosario Unit 2621

  
JOSEPH MANCUSO  
PRIMARY EXAMINER